Department of Energy
Metrology/Accreditation Committee

A Topical Committee of the
Department of Energy
Technical Standards Program

Position Statement on

The Adoption of a Uniform Quality Standard For Metrology and Testing Laboratories*

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*Please note that this position paper by the DOE Metrology/Accreditation Committee is not intended to state DOE policy. Rather, it is a recommendation by subject matter experts from throughout the complex, including both DOE personnel and contractors. Nor does it state an official position or recommendation by the Technical Standards Program Office (TSPO). However, the DOE metrology/accreditation community appears largely in favor of the adoption of ISO/IEC 17025:1999; therefore, we encourage full and careful consideration of that consensus. – Richard J. Serbu (DOE/HQ), Manager, TSPO

References

1. ISO/IEC 17025:1999(E), "General Requirements for the Competence of Testing and Calibration Laboratories" 1999.

Introduction

During the March 2002 annual meeting of the DOE Metrology/Accreditation Committee (the Committee), the need to redefine the minimum common set of guidelines, based on national and international standards by utilizing ISO/IEC 17025:1999, was identified.

Background

During the second annual meeting of the DOE Metrology Committee in 1998, a uniformity working group developed the following task statement: **"To determine a minimum common set of guidelines, based on national and international standards (utilizing ANSI/NCSL Z540-1:1994 and ISO Guide 25), that are acceptable to all Department of Energy programs."**

The uniformity working group surveyed 30 DOE metrology laboratories in order to obtain information about the standards with which laboratories had to comply. Eighteen laboratories responded to the survey. Of the eighteen laboratories, eleven laboratories complied with ANSI/NCSL Z540-1:1994 and two laboratories complied with ISO Guide 25; the other laboratories complied with other standards at that time. Based on the recommendation of the working group, the DOE Metrology/Accreditation Committee adopted a position statement that calibration laboratories supporting DOE Programs utilize ANSI/NCSL Z540-1 1994 as their requirements document, while testing and analytical laboratories supporting DOE Programs utilize ISO Guide 25 as their requirements document.

Revised Recommendation

Based on a review of the current situation both nationally and internationally, the Committee now recommends the use of ISO/IEC 17025:1999 [or the equivalent American National Standard ANSI/ISO/IEC 17025:2000]. This revised standard should replace both ANSI/NCSL Z540-1 as the standard for calibration laboratories and ISO Guide 25 as the standard for testing and analytical laboratories throughout DOE. Adoption of this new standard will allow for greater uniformity between DOE laboratories and their suppliers, as well as ensuring compatibility with both national and international standards. Thus, adoption of the new standard would result in significant benefits to the DOE and its metrology, testing, and analytical laboratories. The benefits are summarized below.

Benefits

1. Adoption of this voluntary standard allows the DOE to comply with both the Technology Transfer Act (PL 104-113) and OMB Circular A-119, in the areas of testing and calibration laboratory requirements.
2. Compliance with this standard prepares DOE laboratories for laboratory accreditation, which is becoming the accepted method for recognizing laboratory competence.
3. Compliance with this standard for all participating DOE programs means reduced costs associated with the maintenance of documentation and separate procedures and processes for metrology and testing laboratories, especially if they support more than one DOE program, or support other federal agencies.
4. Compliance with ISO 17025 requires technical competency, which should result in improved laboratory performance.
5. Acceptance of DOE laboratory measurements and tests in international circles is dependent on compliance with ISO 17025.
6. By accepting this standard, DOE is aligning itself with the national and international calibration and testing communities.
7. By adopting this standard, the credibility of DOE programs is enhanced in the eyes of the public sector, including industry and public interest groups.
8. Since this standard is compatible with current industry practice, DOE will reduce costs when teaming with industry on joint projects.

Cost Impact

Due to similarities between the requirements of ANSI/NCSL Z540-1: 1994, ISO Guide 25, and ISO/IEC 17025: 1999, additional costs to implement the proposed standard will be negligible. Required minor changes to quality system documentation can be accomplished on a phased basis or through simple "pen and ink" changes until the documents are due for normal review and updating. The changes do not require additional equipment, staffing or technical training.

Conclusion

By adopting ISO/IEC 17025:1999(E), “General Requirements for the Competence of Testing and Calibration Laboratories” throughout all DOE Programs, the DOE would be strengthened technically, brought into compliance with public law, and be in harmony with both the national and international testing and calibration communities.